Box Contents

Module(s) of choice
1x Ribbon Cable
1x Information Card

BOOMSTAR MODULAR
MODSTAR

IMPORTANT INSTRUCTIONS - PLEASE READ

Please read the Boomstar Modular Synthesizer Manual completely before use, and retain for future reference.

IMPORTANT Ribbon Cable Power Information:
Boomstar Modular combines a set of individual modules to create a complete instrument. The individual modules can be rearranged, removed, and replaced with any compatible eurorack modules from Studio Electronics and other manufacturers.

Boomstar Modular uses a standard eurorack power rail to connect the modules to the internal bipolar +/-12v power supply. Please pay very close attention to the orientation of the ribbon cable when adding and removing modules. The stripe on the ribbon cable marks -12v. This stripe needs to line up with the -12v pins on the power rail and the -12v pins on the module. **Failure to match up the pins correctly can result in damage to one or all the modules in the Boomstar Modular.** On the power rail, the -12v pins are clearly labeled. On the individual modules, the positive and negative sides of the pin connectors are labeled next to the power header on either the top or bottom of the PCB.

Do **NOT** remove individual modules from the Boomstar while synthesizer is plugged in.

NEVER unplug ribbon cables from the Boomstar Modular, or any other modules while the Boomstar Modular is plugged in.

DIMENSIONS & POWER SPECIFICATIONS - 2

Amplifier

AMP – Size: 8hp
Module depth with ribbon cable attached: 39.7mm
+12 / -12 Power Usage: 36mA, 12mA

Analog Oscillator

OSCILLATION – Size: 48hp
Module depth with ribbon cable attached: 39.7mm
Power Usage:

Digital Oscillator

GRAINY CLAMP-IT – Size: 19hp
Module depth with ribbon cable attached: 35mm
Power Usage: 50mA max

Boomstar Modular Introduction

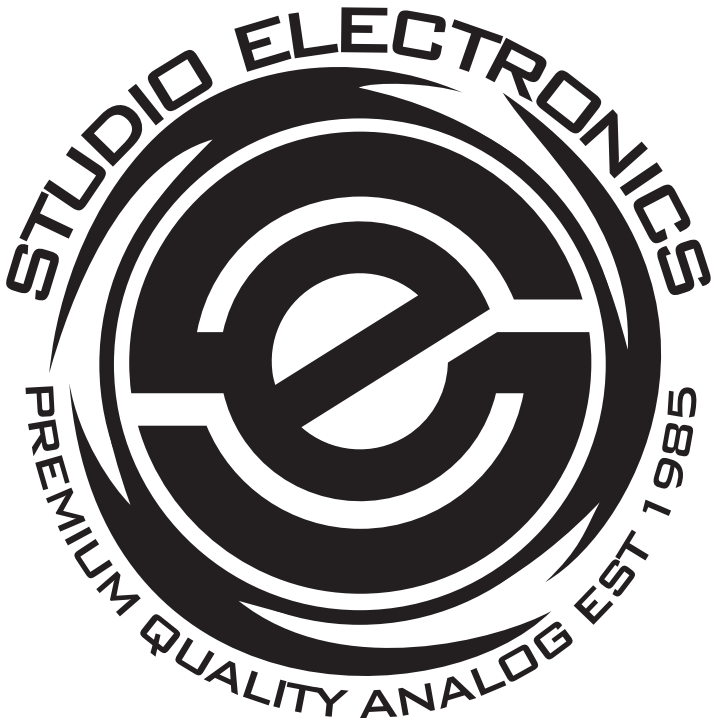
THE BOOMSTAR MODULAR SYSTEM realizes the seemingly inevitable eurorack sprawl of our semi-modular **BOOMSTAR** desktop synth, consisting of 14 modules that dramatically open up the root level programming and sound sculpting of that lush, potent, and fantastically flexible multi-filtered **Boomstar** sound.

What makes it tick: Let's tick 'em off: Class A **5089**, **3003** and **AMP** *, rugged through-hole construction, discrete circuitry, hand-matched transistors in the filters and amplifier, multi-filtered, hand-crafted, Premium Quality Analog sound. We'd like to think we've learned a few things bringing the **MIDIMINI**, **SE1-X**, **ATC-X**, polyphonic **CODE OMEGA** synths, **MODMAX PEDALS**, **C2S**, **PRE 2**, and **SLATE PRO AUDIO DRAGON** and **FOX** to market, and the air waves worldwide.

Our Boomstar Modular System's (Modstar) **5089 circuit** mirrors faithfully the filter design from the Minimoog—it is not a style; it's not a type, not reminiscent of, not vintage inspired—it is the analog sound standard manufactured anew, and how we love it so. Apply the same thinking to our **4075**, **3003**, and **SE80** filters vis-à-vis their originals, and you've caught our drift; the **OSCILLATION** and **AMP** modules also resonate with the Mini's timeless designs, functionality, and gorgeous, gleaming sound—modernized and reimagined by the maestro Tim Caswell himself, but we're just getting started here; the **SEM** filter is on deck.

We hope you are as thrilled with your purchase of the complete system/individual modules as we are with our partnership with **PITTSBURGH MODULAR**, and the final highly collaborative through-hole designs which flowed from the first Nicol/St. Regis Beer Summit at Winter NAMM '13. The **MODSTAR** module breakdown upshot: Filters, Oscillators, and AMP are built by **SE**, and the intoxicating remainder by our good friends and exceedingly savvy business partners at **PGH**—without whose invaluable, real world/walking the streets of Euroland insights, experience, and deep resources, this project would have faded to grey. A tip of the **SE** chapeau to Richard Nicol, Perry, and the full-strength, generally less-weathered outfit at **P. M**. AND to Geoff Farr who relentlessly hounded the St. Regis bros—"When are the euro modules going to be ready?" Looks.

* See pg.17, par. 2 for caveat.



Modular Signal Paths

(Copy courtesy of Pittsburgh Modular)

The **BOOMSTAR MODULAR'S** signal path is divided into two types of signals: audio signals and control voltages.

The audio signal is the sound that is produced. The audio signal path starts at a sound source such as a Waveforms oscillator, LFO running at audio rate, or the Filter in oscillator mode. The audio signal is then patched through other modules used to shape the sound such as mixers, filters, and amplifiers.

Control voltages (CV) manipulate the audio signal in several different ways.

Gates are represented by a high or low control voltage. A gate can be generated using a square or pulse wave from an oscillator or LFO, or by using a gate output from an external sequencer, or MIDI keyboard. A gate can be shaped using an envelope generator to control the attack, decay, sustain, and release of the gate. The modified gate signal can then be sent to any CV input on the synth.

A second use for control voltages is as a modulation source. For example, a control voltage from the **SCI-FI S/H OUT** (Sample and Hold) module patched into the 1V/O input on an **OSCILLATION** module controls the frequency of the oscillator based on the randomly generated sequence of notes, additionally, the **OSCILLATION** module's full range oscillators make perfect control voltage modulation sources; and audio signals make excellent control voltage source for oscillator FM (frequency modulation). Understanding exactly how it works can sometimes hinder creativity—experiment!

GRAINY CLAMP-IT

Description

GRAINY CLAMP-IT is a granular and phase modulated additive oscillator—brand new heavy territory for Studio Electronics... we know; wait till you hear the stunning contrast it creates when paired with our discrete Class-A OSCILLATION module, and the inorganic to downright 1970's combo organy / CS-80-ish tones it can generate. Pure voltage-controlled candy. Be sure to wash off the sticky...

Best to break Granny Clampett's namesake down in stages, and time travel a bit.

First Stage - Additive mixing of 4 harmonics using one of 16 waveforms, and one of 16 combinations of harmonics.

Second Stage - Granular or phase modulated mixing of the signal from the first stage, with a sync option.

Back to the First Stage - Additive section with selection of 16 different combinations of harmonics. The harmonics can be based on a sinewave or on one of 15 other waveforms. There's a separate control for mixing the selected harmonics.

Back to the Second Stage - The second processing stage allows granular processing or phase distortion. Granular processing gives you control over grain length and grain position, and can produce sync, detune, and wave sequencing effects. Phase distortion allows the signal from stage one to "look up" non-linearly, and can produce thick detune sounds and wildly varying pitch/timbre effects.

GRAINY CLAMP-IT - 2

Patch It Up

Five patch points: **1V/OCT**, **L/P CV**, **OMX CV**, **S/A CV**, **OUTPUT**.

All Controls— arranged in order of signal flow —and Patch Points

WAVE TYPE – Selects one of 16 source waveforms.
OT TYPE – Combines 4 copies of the Wave Type – selects one of 16 variations of four overtones.
OT MIX – Controls the mix of the four overtones, from lowest pitched to highest pitched dominance.
DETUNE – Combines the resulting mix with a copy of itself and detunes it up to one octave.
GRAIN/PD – Selects the next processing stage: Up: Granular, or Down: Phase Distortion.

GRAIN

LEN/PITCH – Sets the grain length, for pitch and sync effects.
SPACE/AMT – Sets the spacing between grains, for detune/wave-sequence effects.
FIX – Up: Len/Pitch controls pitch; Down: Len/Pitch controls sync.
RANGE – Up: Grain sample window is long, for wave sequencing (set Space Amt to 0); Down: Grain sample window is short, for detune effects.

PD

LEN/PITCH – Controls the pitch of the processed sound.
SPACE/AMT – Controls the amount of phase distortion.

GRAINY CLAMP-IT - 3

FIX – Up: the pitch control of Len/Pitch is continuous; Down: Len/Pitch selects a range of fixed pitches.
RANGE – Up: PD sample window is long, for wave sequencing; Down: PD sample window is short, for detune effects.
1V/OCT – One volt per octave control voltage input.
L/P CV – Length/Pitch control voltage.
OMX CV – Oscillator Mix control voltage.
S/A CV – Space Amount control voltage.
OUTPUT – Audio Output.

1 Year Limited Warranty

LIMITED WARRANTY TERMS AND CONDITIONS

This Limited Warranty applies only to ANALOGIA INC./STUDIO ELECTRONICS purchased in the United States of America. Outside the USA, warranty policy and service is determined by the laws of the country of purchase and followed by our local authorized distributor. A listing of our authorized distributors is available at http://www. studioelectronics.com/shop/distributors/

ANALOGIA INC./STUDIO ELECTRONICS warrants to the first owner of a covered product purchased directly from ANALOGIA INC./STUDIO ELECTRONICS, or an authorized ANALOGIA INC./STUDIO ELECTRONICS dealer in the U.S., that this product will be free from defects in materials and or workmanship for a period of one year from the date of purchase. Please register this product online at http://studioelectronics.com/support/ registration/ to establish the date of purchase (NOT A REQUIREMENT FOR WARRANTY SERVICE BUT A GOOD IDEA).

To exercise your rights under this Warranty as the first owner/purchaser, **YOU MUST SHIP THIS PRODUCT IN ITS ORIGINAL PACKAGING** (which we can replace and send to you for $10) at your expense, with proof of purchase documentation and the ANALOGIA INC./STUDIO ELECTRONICS supplied power

adapter, to ANALOGIA INC. An RMA (Return Material Authorization) number from ANALOGIA INC./STUDIO ELECTRONICS must be obtained first before returning any product. Email RMA requests to rma@ studioelectronics.com, or call us at (310) 640-3546 to secure an RMA #. Products shipped to ANALOGIA INC. without an RMA will be refused and returned. Shipping insurance is optional, but highly recommended.

ANALOGIA INC./STUDIO ELECTRONICS will repair or replace this product at its sole option and at no charge to you for parts and labor—when deemed necessary and within the warranty period—provided that ANALOGIA INC./STUDIO ELECTRONICS reserves the right to determine whether the product is “defective” for purposes of this Limited Warranty. This Warranty does not apply if damage to this product occurrs as a result of abuse or misuse, abnormal use or handling, improper packaging, another product’s interaction, exposure to temperature extremes, or if the product has been altered or modified/ customized in any way, or the damage was caused by unauthorized repair or service. The original product must return to ANALOGIA INC. unaltered.

1 Year Limited Warranty - 2

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This Limited Warranty and the right of replacement is in lieu of any and all other warranties—which you hereby waive—and it gives U.S. purchasers specific legal rights. You may also have other rights which vary from State to State.

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STUDIO ELECTRONICS SYNTHESIZERS